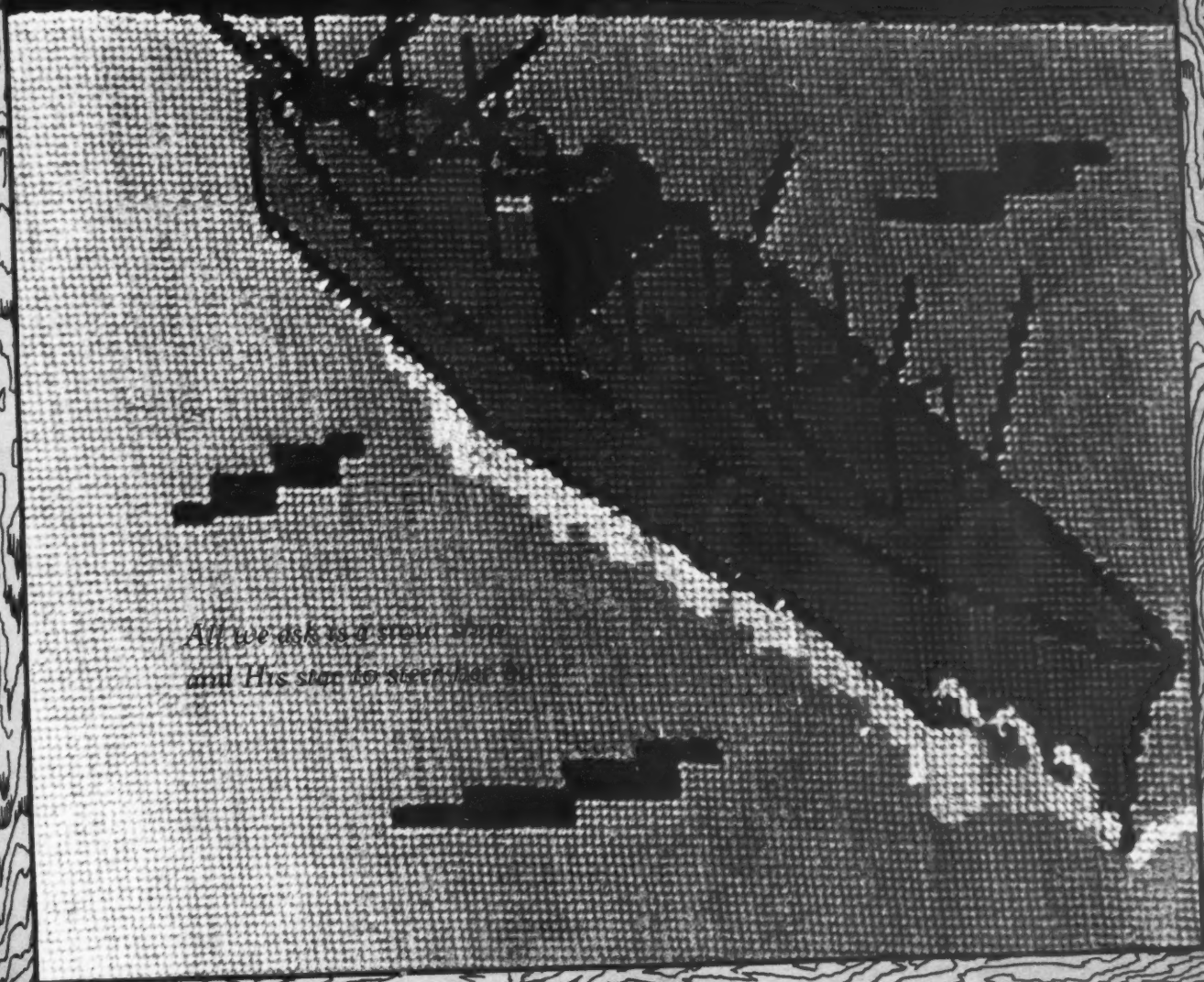
sealift

december 1975



Season to Reflect

Beginning with Thanksgiving in late November, and ending with the advent of the New Year, Americans traditionally observe what has come to be known as the Holiday Season.

November 27—Thanksgiving day—is a day on which we give thanks, each in our own way, for the blessings and good fortune which have been our lot. For Christians, December 25 is an occasion to commemorate the birth of Christ, and to renew our faith not only in a supreme being but also in our fellow man. For Jews, the 8-day observance of Hanukkah begins November 29. The end of the old year and advent of a new one is a period for reflection, a time to review our activities during the past 12 months and to formulate resolutions which we hope will assure greater success and happiness during the next year.

It is an understatement to say that we live in an imperfect world and that we share many weaknesses and human failings. But we do a great disservice to our fellow man—the achievers who have written the history of mankind and nurtured the technological orchards which now bear such bountiful fruit—if we accept imperfection and occasional failure as handicaps. Like the young who enter into every aspect of the holiday season with unbridled enthusiasm and complete faith, all of us should look upon a new year as a stepping stone.

As we grow older we value the voice of experience more and the voice of prophecy less. We find more of life's wealth in common pleasures, home, health and children, and we place greater value on the worth of men and less on

the wealth they have acquired. We appreciate our parents more, and we are proud of the successes and tolerant of the failures of our own children. We hurry less, and usually make more progress.

We obtain even greater benefits from experience, our investment in life, if each of us has a creed by which we live, and in which we believe. One of the finest is that expressed by John D. Rockefeller, Jr. He said, "I believe:

"In the supreme worth of the individual and his right to life, liberty and the pursuit of happiness.

"That every right implies a responsibility; every opportunity, an obligation; every possession, a duty.

"That the law was made for man and not man for the law; that government is the servant of the people and not their master.

"Thrift is essential to a well ordered living and that economy is a prime requisite of a sound financial structure, whether in government, business, or personal affairs.

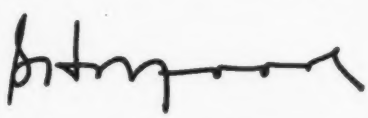
"Truth and justice are fundamental to an enduring social order.

"In the sacredness of a promise, that a man's word should be as good as his bond; that character—not wealth or power or position—is of supreme worth.

"The rendering of a useful service is the common duty of mankind and that only in the purifying fire of sacrifice is the dross of selfishness consumed and the greatness of the human soul set free.

"In an all-wise and all-loving God, named by whatever name, and that the individual highest fulfillment, greatest happiness and widest usefulness are to be found in living in harmony with His will."

If we can follow those precepts, 1976, our bicentennial year, is bound to be a rewarding and satisfying year for each of us, and for the nation we serve.



Commander, Military Sealift Command

COVER: This month's Sealift cover was especially created for Military Sealift Command for Christmas 1975. Designed by Washington, D.C. artist Linda Scott, it was embroidered in needlepoint by Sealift staff member Cindy Buckley.

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Two barges with approximately 4,000 refugees are taken to USNS Greenville Victory. Feeding them was a problem.

How to Give a Cook an Ulcer

By Louis R. Granger

There was rice everywhere. It was in 30-gallon steamers, in pots, in pans, even in the sink. There were 1,200 pounds of it and when that ran out two tons more were put aboard.

Rice was cooked with sardines, with beef, with ham, tuna, salmon and chicken, and it was delivered in "everything we could find to carry the stuff in," said Carl J. Moore, chief steward aboard USNS Greenville Victory.

Greenville Victory, a 31-year-old cargo ship, was among 14 Military Sealift Command controlled vessels that with other MSC directed tugs and barges evacuated more than 179,000 South Vietnamese refugees between March 28 and May 15 this

year. According to historians, it was the biggest evacuation in modern history.

Moore knew he had a problem as he watched 7,000 South Vietnamese refugees clamber aboard the ship at Cam Ranh, a South Vietnam coastal city about to be overrun by enemy troops.

Planning a menu and serving 47 hungry crewmen is tough enough, but having 7,000 uninvited guests drop in for a couple of days can give a cook an ulcer.

Greenville Victory Master Raymond Iacobacci set a course for Phu Quoc Island around the southern tip of South Vietnam the evening of April 2. The next morning, said Captain Iacobacci, "word was somehow received by the refugees that the ship was not destined for Vung Tau (near Saigon) as they believed, and the passengers became restless. Our immediate problem at that time, however, was in getting food to the refugees since many of them had not eaten in four to five days."

There was plenty of food aboard, but getting it cooked and distributed was another matter. "The first servings of food brought out to the refugees caused a mass rush with much pushing and shouting," the captain said. "The men distributing it, or trying to distribute it, were in danger of physical injury." Eventually the situation improved, but it took hard work and sharp organization.

"I knew they liked rice so I cooked all we had. Every bit of it. Every grain. I even used all the spaghetti and macaroni. I used everything," said Moore.

Some of the refugees could speak English and Moore questioned them to learn what types of food the refugees liked. It seemed they liked nearly everything.

Including Moore, Greenville Victory carried a team of six cooks, bakers and messmen. They were assisted by 16 South Vietnamese Boy Scouts who volunteered to help in any way they could. The Scouts were assigned to the galley where they mostly cooked rice and brewed tea.

The steward's department consisted of Moore; Robert Paige, chief cook; Aleck G. Harrison, cook-baker; Miguel A. Rosa, 3rd cook, and messmen Wilson A. Gonzalez and Richard McDonough.

"We tried to feed the children first," said Moore. "I had eight or nine cases of condensed milk and mixed it with water. The children loved it. I gave them what candy I could dig up and they seemed to be very happy." Milk was made from non-fat dry milk, carried as a staple aboard the ship.

The rice was cooked in 30-gallon jacketed steam kettles and in all the pots and pans available. To cook as much rice at one time as possible Moore's galley team plugged up the sink, connected a hose to a steam table pipe and used steam to boil water in the sink.

Primarily a tea drinking people, the refugees did not find coffee to their liking, but everything else was welcome, reported Moore.

Salt was so popular it was offered in 5-pound bags. Sixty pounds of the condiment were placed on deck in

Refugees gone and his rice cooking days behind him, Greenville Victory chief steward Carl Moore checks a ham in the galley.

strategic locations so the refugees would not crowd one area and cause more confusion than there already was.

"We set food out at several places on deck and carried it down each hold," said Moore. An English speaking refugee was assigned to each group to explain what was going on. Wooden ladders had been constructed earlier and one was placed in each of the ship's five holds leading from the main deck to the bottom of the cargo hatch.

Rice was delivered in 30-gallon cans, one for each hold, and was hoisted down the hatch by ship's gear. The vessel had an ample amount of dishes for the crew, but not for 7,000 refugees. So, waxed paper was used for plates.

Moore not only directed the feeding of the 7,000 plus crew, but early the first morning he was called on to act as midwife. The troop compartment had been turned into a hospital and two South Vietnamese doctors were treating the sick. At 2 a.m. one of the doctors asked Moore to help him with the delivery. "I did what I could and I got a half-dozen pillow cases and made gowns for the baby."

As the difficult task of feeding the refugees continued, another drama was unfolding that most of the refugees and some of the crew were unaware of. About noon April 4, as the ship was waiting off Phu Quoc to unload, armed militant refugees threatened destruction of the vessel if it were not immediately put under way to Vung Tau.

Considering the safety of the crew and passengers and the preservation of the vessel, Captain Iacobacci agreed. That afternoon Greenville Victory arrived at Vung Tau and by 6:30 p.m. all the refugees had disembarked.

But Greenville Victory's crew was not finished with the humanitarian evacuation effort. The vessel was moved up the Saigon River to the naval base at Newport for resupply, cleaning and to get medical assistance for some of the crew. There were 10 cases of conjunctivitis (pink eye) among the crew and several of the men had the flu.

Moore replenished his galley from the military commissary at Newport and the crew again set sail for Vung Tau. While waiting for another refugee lift, the crew caught up on ship maintenance.

Finally, early in May, 3,000 more refugees boarded, this time to be taken to Subic Bay in the Philippines. Although there was plenty of food, the Navy delivered more at Vung Tau, and the rice supply swelled to nearly two tons.

"We had so much food there was no place to put it," said Moore.

The trip to the Philippines was uneventful and the refugees were grateful for their treatment. "The people thanked us, and even if they couldn't speak English, we could see what they meant. And I was happy to see them happy," concluded Moore.

Chief cook Robert Paige (left) may never forget when his galley was filled with rice and South Vietnamese Boy Scouts. At right is Nicholas R. Escobar.

After 102 Years, U.S. Lines

Grows With the Times

By Edward J. Heine, Jr.

Time: The last week of March 1975.

Place: DaNang, South Vietnam.

Scene: DaNang is in turmoil with more than a million refugees tripling the size of the city's normal population. The headlong retreat of the South Vietnamese Army has become a military disaster of catastrophic proportions. An estimated 100,000 government troops, separated from their units and under no military discipline, add to the problem.

* * *

In retrospect, we now can see that the agonizing last chapter has begun in the tragic story of South Vietnam. The Military Sealift Command (MSC), faced with the humanitarian task of rescuing as many South Vietnamese as time permitted, diverted three of United States Lines' cargo ships to DaNang with orders to commence operations immediately. The ships—under charter to the MSC for the past three years and all in Southeast Asian waters—converged on the port area of the ill-fated republic's second-largest city.

On March 27, the U.S. Lines' S.S. Pioneer Contender began loading refugees. The cargo vessel made two trips from Cam Ranh Bay, the old U.S. port which became a temporary dumping ground for the mass of men, women and children fleeing the advancing North Vietnamese Army. On the first voyage, 5,600 refugees were carried. On the second, 6,000.

When it became apparent that Cam Ranh Bay would also fall, Pioneer Contender was ordered to resume rescue operations. An incredible mass of humanity crowded onto the ship—built to carry cargo, not passengers—filling every inch of hold and deck space. The official count for the number of refugees from Cam Ranh Bay to Phu Quoc Island—Southwest of Saigon in the Gulf of Thailand—was 16,600.

A spokesman for MSC acknowledged the feat of the Pioneer Contender by pointing out that this was the largest number of refugees ever carried on a ship of any kind. The previous high occurred during the Korean War when a cargo ship carried 14,900 refugees.

Two trips also were made by the S.S. Pioneer Commander which carried 8,000 refugees on each voyage—

U.S. Lines containers are unloaded from the SS American Leader at Savannah, Ga.

one from DaNang to Cam Ranh Bay and then from Cam Ranh Bay to Phu Quoc Island.

The third U.S. Lines' vessel involved in rescue operations was the S.S. American Challenger. It made one trip from Cam Ranh Bay to Phu Quoc Island.

The total number of refugees rescued by U.S. Lines' ships was 54,050. The full total of refugees lifted by all ships engaged in the operation was nearly 180,000.

None of the trips by any of the three ships could be called a pleasure cruise. In a number of cases refugees, wounded when they fled their homes, died at sea. The impossible crush of humanity caused all attempts at sanitation to break down. Decks became awash with human feces. Food and water became scarce.

Each of the ships is capable of steaming at 22 knots per hour, making them among the fastest break bulk cargo vessels afloat. Their deadweight tonnage is about 13,500 tons. Their overall length is 560½ feet and their breadth is 75 feet.

As president and chief executive of U.S. Lines, I have long recognized that the men and ships of the U.S. Merchant Marine have obligations that go far beyond that of the vast majority of private capital ventures. In chartering our ships to MSC we placed ourselves at the disposal of the military, ready to follow orders in the same way that anyone wearing an American uniform does.

The role U.S. Lines played in carrying out our government's policy in South Vietnam is, I strongly believe, one of the proudest chapters in U.S. Lines' 102-year history. The men who sailed on these ships performed magnificently under the most trying conditions, acting with both courage and compassion.

Much of U.S. Lines' trade, of course, has nothing to do with the military. We are the second largest shipping firm flying the American flag with 16 high-speed, high-capacity container ships that maintain the Lines' 15,000-mile tri-continent service between Europe, the East and West Coasts of the United States, Panama, Hawaii, Guam and the Far East. Nine feeder vessels also transport cargoes to ports not on the primary trade routes.

The company also has 14 fast Challenger class general cargo vessels engaged in charter service in trans-Atlantic and trans-Pacific areas.

U.S. Lines is credited with pioneering in the development of container ships, the dominating force in the cargo world today. To service our customers we have had to develop container terminals throughout the world, wherever our ships are engaged in trade.

So you may fully understand the vastness and complexity involved in running a modern container ship shipping company, I would like to tell you about our newest marine facility, the Howland Hook container port, located on New York's Staten Island.

This major marine facility represents an investment of private and municipal capital in excess of $72 million. It was designed to handle an estimated 25 per cent of the more than 1,000,000 containers that pass through the Port of New York—the "Container Capital of the World"—each year.

The facility sprawls over 187 acres and is equipped with the latest electronic technology. Every container handled by U.S. Lines that is routed through Howland Hook, for instance, will be controlled by a vast master computer control system. The computer also will keep track of all containers from the moment they leave the shipper until they reach their points of delivery, provide instantaneous equipment inventories and locations, expedite documentation, safeguard cargo against theft and

U.S. Lines' newest marine facility, the Howland Hook container port, sprawls over 187 acres on Staten Island. The port can handle some 250,000 containers a year.

program the five especially designed high-speed container cranes used to load and unload ships.

Some other features of the facility include: a concrete wharf that is nearly a half mile long, a parking lot that is capable of parking 2,765 containers and equipped with temperature control facilities for refrigerated cargo, direct access to a rail siding and major highways, and five gantry cranes capable of lifting 40 tons each, making it possible to load and unload simultaneously three huge U.S. Lines' 32,000-ton container ships.

Howland Hook provides employment for hundreds of workers, including stevedores, maintenance and repair personnel, a security force, office help and others in marine-related skills. Payrolls alone are expected to exceed $8.1 million a year.

From the shippers' point of view, the facility represents a great step forward because it eliminates the nonproductive waiting time that is the bane of the trucking industry. Howland Hook can accommodate 1,000 trucks a day without delay in a quick and smooth process of import and export shipment. Another feature that appeals to the shipper is the fact that all of U.S. Lines' containers are mounted on wheeled chassis, thus providing extra mobility and eliminating extra handling.

The terminal's physical assets are impressive. They include: an entrance gate with 20 slots, a two-story gate house in which 13 of the 16 lanes are equipped with weight scales, a two-story administration building which houses the administrative staff, and a container freight station shed, 100,000 square feet in size, where less-than-container-load import and export cargo is stripped and stuffed. Maintenance and repair facilities also are included.

In addition, the terminal now has under construction a new centrally located six-story observation tower. The tower, budgeted at $350,000, provides a vantage point from which supervisory personnel may oversee all terminal activities.

Because of its size, the huge terminal maintains its own bus service, moving personnel and customers from area to area on a continuous basis. A unique pneumatic tube system speeds paperwork and communications.

Other new U.S. Lines' terminals recently completed and now in operation are at Oakland and Long Beach, Calif., and Sand Island, Hawaii. Another is under construction in Hong Kong for occupancy next year.

Although U.S. Lines is an all-cargo carrying shipping firm today, it was founded under the concept of restoring to America the prestige of running ships in North Atlantic trade that were the fastest and most luxurious liners afloat. U.S. Lines' famous Blue Eagle house flag has flown from the masthead of a score of ships that have won honors in the Atlantic. It is a history of which we are proud.

It all began in 1872, when a group of Philadelphia businessmen founded the American Line, determined to regain supremacy for the American flag in the East Coast-Europe trade. At the time it was the only American-flag service in the North Atlantic.

In keeping with this aim, four vessels were built to order at Cramp's Shipyard in Philadelphia. They were designed to beat the crack ship of the day, the City of Brussels. These steamers, the Ohio, Pennsylvania, Indiana and Illinois, were equipped with the first compound engines ever built in America. Not only were they speedier than the City of Brussels, but also were safer and more economical to run. In a superb demonstration of American ingenuity, their design demonstrated the ability of the United States to compete successfully against foreign flag vessels. They were able to run on half the fuel of their rival, required but half the engine room complement and were the first ships to carry life rafts built on modern principles.

For the next 50 years the American Line made history and restored the prestige once held by American-flag ships on the Atlantic route. American Line ships carried millions of passengers without loss of life, earning the reputation of being "lucky" ships. The truth, of course, was that it was luck shaped by superior construction and superior handling.

New ships were built, ships whose names soon became household words for the travelers of two generations. The New York, Paris, St. Louis and St. Paul were the glamour ships of their day and Americans traveling on them felt a surge of pride and patriotism because the vessels were a symbol of an America coming of age.

Only twice was the continuity of service rendered by these ships interrupted. The first occurred during the Spanish-American War when all four served as scout cruisers for the Navy in Cuban and Puerto Rican waters. The second occurred during World War I, when they were pressed into service as troop carriers, using their superior speed to dodge the torpedoes of German submarines.

United States Lines became the successor to the old American Line in 1930, when a fleet was purchased from the government consisting of the Leviathan (then about 20 years old), the President Roosevelt and the President Harding. To supplement this fleet, two luxury liners, the Manhattan and Washington, were put under construction.

The Manhattan and Washington, the two largest liners ever built in this country and the first large passenger vessels to be built in America since 1905, joined the New York-channel ports-Hamburg service where they won instant popularity. This proved conclusively to management at that time that there was a place for the medium-sized luxury liner of about 22-knot speed with good cargo capacity.

The S.S. America, the largest and fastest vessel ever built in this country up to that time, was launched in 1940. World War II, however, precluded her placement on the Atlantic run. She was inducted into service, renamed the West Point, and spent the next four years

ferrying more than a half million troops of all the allied nations 400,000 nautical miles. During her war years she had the distinction of never missing a day of duty because of mechanical failure.

The next milestone in the history of U.S. Lines occurred shortly after V-E Day. Gen. John M. Franklin, then president of the carrier, discussed a dream he had with officials of the U.S. Maritime Commission. He wanted, he said, to restore to America the coveted blue ribbon for speed supremacy of the Atlantic by having built the fastest and most luxurious superliner afloat. In addition, he pointed out, equal consideration would be given to making this new ship quickly convertible to a troop carrier in time of national emergency. The defense features were to include special structural designs for safety, the highest standards of fire resistance, added auxiliary speed and long cruising range.

"The ship I have in mind," General Franklin said, "will be able to transport 14,000 troops 10,000 miles without putting into port for fuel, fresh water or supplies."

The dream became a reality when the S.S. United States, built by the Newport News Shipbuilding and Dry Dock Co., was launched in June of 1951. In July of 1952, the United States earned the right to be called "First Lady of the Sea" when she broke the trans-Atlantic speed record. On her first voyage she carried more than 1,600 passengers and 1,000 officers and crew.

During her first 12½ years of service, the United States completed 276 round trip voyages to and from the European ports of Havre, Southampton and Bremerhaven during the winter months, and carried 792,016 passengers who were just under 90 per cent of her total capacity.

But more than that. She was a great source of national pride. Americans looking at her sleek lines knew they were looking at a symbol of America's industrial genius and know-how, and in some magical way felt good about being an American.

Times have changed and the United States along with the other great liners of her day like the France, Queen Elizabeth and Queen Mary, no longer ply the Atlantic. No liner can ever hope to compete with the speed of a jet plane. And speed, in the movement of people and cargo, is what the modern world is all about.

But while the shipping industry has found that it can no longer compete with the jet engine in the business of transporting people, it can in transporting cargo. This need for speed has transformed the industry from break bulk cargo to containerization. Today's modern container ship can unload and load in one day and be on its way. The old-style break bulk cargo ships needed three or four days in port. That is why there is a need for container ports like Howland Hook.

Still, even a hard-headed businessman like myself looks back with a certain amount of regret. Seeing the United States steam into the Narrows after a voyage to Europe lifted the spirits because one knew one was looking at sheer beauty. That day is done and gone and there are those like myself who think the world is a little bit poorer because of it.

Edward J. Heine, Jr. was named president and chief executive of United States Lines, Inc. in 1970. He is a graduate of the U.S. Merchant Marine Academy at Kings Point, N.Y. and served in the U.S. Merchant Marine during 1944-1946 and the U.S. Navy during the Korean War in 1950-1951.

He was graduated from Seton Hall University and received a law degree from Fordham University with honnors. Prior to joining U.S. Lines, he was a senior law partner with the admiralty law firm of Kirlin, Campbell and Keating.

Probing the Sepik River

By Dr. Donald W. Strasburg

In May 1975, USNS Mizar spent 12 days in the waters of Papua New Guinea to obtain environmental data from a region thought to be free from the more obvious sources of pollution. Data was obtained for comparison with similar observations already made in the Gulf of Mexico and to be made in other parts of the world.

Mizar's New Guinea visit was at the request of the branch of marine biology and biochemistry, ocean sciences division of the Naval Research Laboratory in Washington, D.C. There, scientists are studying a variety of marine biological situations which could affect operational effectiveness of the Navy.

Among these studies are investigations of the toxicity of marine bottom sediments; the occurrence of slicks, films and organic materials in the upper layers of the sea, and the phenomenon of bioluminescence or marine "phosphorescence." The Navy has obvious interests in the consequences of disturbing the bottom by dredging or construction, and the occurrence of slicks, films and organic matter is related to hull-fouling.

For example, there is evidence that some of the organic matter which accumulates on submerged surfaces may be forerunners of fouling organisms such as barnacles. Their detrimental effects are well known.

Navy interest in bioluminescence relates to the fact that in some areas this phenomenon is so frequent or so intense that activities might be revealed by the glowing halos or wakes which occur around ship hulls at night.

The Mizar cruise commenced at Madang, on the northeast coast of Papua New Guinea, in mid May. Under the command of Capt. Ian MacCaulley, Mizar proceeded from Madang in a northwesterly direction along the New Guinea coast, arriving at the mouth of the Sepik River after an overnight run.

The Sepik is the largest and most important river on the north coast of New Guinea and was selected for

Able-bodied seaman James Sonni (left) and 3rd officer John Matwijeczko of USNS Mizar pass by Kopar village.

investigation because of the absence of commercial development there. It was near the end of the rainy season and the flooding Sepik was the color of well-creamed coffee. The current at its mouth measured 4½ to 6 knots.

The river banks and nearby ocean beaches were a tangled mass of driftwood and other debris brought down by the high water. The river itself was dotted with drifting logs as well as many floating islands of green vegetation. Some of the islands were former river banks which had been undercut and detached during the river's flood stages.

Usually they were stands of tall grass but sometimes they included trees and shrubs as well. Islands as large as a half acre have been reported. They are obvious hazards to ships, for upon striking an anchored vessel their size and momentum could cause the anchor to drag.

Although listed as navigable for large vessels for 60 miles, the Sepik was too shallow for Mizar which is fitted with protruding sonar domes used to locate objects on the sea floor. It was these domes which enabled Mizar to find the sunken submarines Thresher, Scorpion and Eurydice earlier in her career. Mizar consequently lay at anchor off the Sepik's mouth, and we had to go up river by lifeboat.

Mizar crewmen and NRL scientists work together in taking sediment samples from Sepik River.

The swift current was a major problem, and great effort was required on the part of the boat crew to locate easy water along the river banks. Each day we became more familiar with local conditions and hence could proceed farther and farther inland.

The Mizar scientists occupied a series of sampling stations from the Sepik's mouth to a point 10 miles upstream. Water samples were taken at each station for analysis to determine the presence of light hydrocarbons such as methane and carbon monoxide.

In addition, samples of the bottom were collected by means of a 10-foot plastic pipe, whose lower end was fitted with a valve, which was plunged into the bottom mud by scientists in the lifeboat.

Owing to the extensive bottom-scouring of the river, the channel was very deep and extended surprisingly close to the banks. The river was frequently about 30 feet deep only 15 feet from what appeared to be shore.

To collect sediments it was usually necessary to tie up to a palm tree or other vegetation on the shoreline, but even there the 10-foot coring tube was sometimes too short to touch bottom. Complicating matters was the fact that often the only vegetation available for mooring was a species of palm completely covered with 3-inch spines.

Despite these difficulties, a large number of sediment samples was obtained and frozen for return to Naval Research Laboratory. They have now been divided into sub-samples to be apportioned to a number of specialists for study. Detailed analyses will be made for cancer-producing hydrocarbons, heavy metals, pesticides, organic materials and their toxicity to algae.

It was not possible to sample the river for films and organic materials from the motorized lifeboat. The fuel residues and other contaminants given off by a boat would have masked the materials sought which occurred only in trace quantities.

Instead, a small skiff was towed by the lifeboat and when a sampling site was reached, the little boat was paddled upstream ahead of contamination. Water samples were collected from the smaller boat by skimming the river's surface with an immaculately clean screen.

Three days of river ascents were required before our goal of a 10-mile penetration of the Sepik was finally attained. The blazing sun, high humidity and incessant diesel noise and smell made these all-day trips both tedious and uncomfortable.

Often there was little to do between stations but to watch the colorful birds, or to contemplate the passing shoreline and drifting islands. Some of us kept a watch for crocodiles, but none were seen. These animals have

Kopar village chief Baik (right) and his brother Mibu were hosts to scientists and Mizar crew.

been hunted excessively and are now protected by the Papua New Guinea government.

Occasionally a New Guinea canoe would slip past going in the opposite direction, borne lightly along by the swift current and standing paddlers.

The most pleasant event of the daily routine was the lunch break, taken in the shade of some convenient overhanging tree. Sandwiches, fruit and cold water did much to revive our spirits. With one exception, there was no possibility of going ashore for sightseeing or research for the river's margins were flooded jungle too dense to permit setting foot on shore.

The single exception was the village of Kopar, on the north bank of the Sepik, two miles from its mouth. Each day Kopar villagers stood on the bank and watched and waved as we sailed by on a sampling mission.

We became increasingly interested in their village and ways of life. Near the end of our stay on the Sepik we visited the village. We pulled into a convenient natural slip where we were given an enthusiastic reception by the people. Distributing cigarettes and fresh American fruit as we went, we were led through the neat village whose buildings were built on stilts as a precaution against high water.

Pulled up onto the banks for repair were large canoes which were extensively ornamented and carved, and whose bows bore effigies of crocodiles. At the chief's house was a huge drum made from a hollowed log also decorated with the crocodile motif.

The most unusual sight was the preparation of sago starch by the village women. This edible starch occurs among the stringy trunk fibers of the sago palm, which flourishes along the river banks. The palm logs are split in half lengthwise and the fibrous trunk material hacked out with adzes. The women shred, wash and squeeze this material in troughs of water, and the starch ultimately settles to the bottoms of the troughs. It is removed, formed into reddish bricks and dried for storage.

Softened with water before being eaten, sago starch is a staple in the diet of the Sepik people. The main activity of the women seemed to be its preparation. The women also tended the family's pigs, each of which was named and would come to its owner's call at feeding time.

The most surprising thing about Kopar was its basketball court. After a tour of sea duty, the Mizar scientists and ship's crew were delighted to stretch their legs in a game of basketball with the Kopar men.

Upon completion of the Sepik River studies, Mizar spent several days in the offshore waters of the Sepik's mouth and in the vicinity of the nearby Schouten Islands. Additional bottom sediment samples were obtained by means of a grab-sampler lowered by winch from Mizar's U-frame. This sampler was cocked before lowering, and upon contacting the bottom, a trigger released a jaw which snapped shut to enclose two liters of bottom material.

An acoustic pinger attached to the wire above the sampler permitted its descent to be followed on Mizar's precision depth recorder. When the acoustic trace showed the sampler to be at the bottom, the winch was used to bounce the sampler on the bottom to ensure triggering of the sampling mechanism. Eight additional sediments

Kopar villagers gather around highly decorated canoe while it undergoes repair in village "drydock."

were collected in this way at depths between 45 and 1,325 meters (49½ and 1,457½ yards respectively). Additional water and air samples were taken at the same time.

Once away from the river it was also possible to commence our studies of marine bioluminescence. Necessarily done at night, they were best undertaken on moonless nights because of the inhibitory effects of light on the luminous flashing of the organisms involved.

Most of these luminous marine animals are planktonic, that is they are weak swimmers and simply drift with the currents. This also means that they are generally small or tiny. They were collected by a fine-meshed net towed at the surface one hour after sunset, and just before dawn.

The plankton accumulated in a bottle attached to the rear of the conical net. After 15 minutes of towing, the net was hauled aboard the darkened ship and the collecting bottle wrapped in a black cloth so that stray light would not inhibit the organisms from glowing.

The specimens were taken to a photographic darkroom and examined with a microscope while still alive. The luminous species were sorted out to provide a basis for shoreside analysis of the rest of the sample, which would in the meantime be preserved in formaldehyde. Of the luminous animals encountered, krill (one of the principal foods of baleen whales) were taken in every tow. Salpas and jellyfish were common, and fish and squid were less common.

We were surprised at the general lack of luminous dinoflagellates (microscopic plants) which we had expected to be the dominant luminous form and which we had hoped to culture in special equipment brought for that purpose. Dinoflagellates were so rare that no culturing could be done.

Every second plankton tow was followed by a one-hour lowering of a recording bathyphotometer, an instrument which measures luminosity at various depths. The outlet of the bathyphotometer was connected by a hose to a sampler containing a fine-meshed gauze, which was automatically advanced at timed intervals. This arrangement allowed collection of bioluminescent organisms in such a manner that a statistical study can later be made to relate the shape and frequency of the recorded light flashes to the particular species which emitted the light.

The data will be compared with that acquired by plankton tow and varied water-sampling devices. We are interested in the geographical variations in bioluminescence as well as changes stemming from the time of day and water depth. Water clarity is also important, for turbidity could mask some bioluminescence. This would be especially true in the Sepik estuary which contains much suspended material.

Special sampling devices were used to collect and culture the bacteria, yeasts and fungi occurring at various water depths. These organisms were reared under standardized conditions and counted. In general, the highest counts seemed to occur at depths corresponding to the

bottom of the photic zone (the maximum depth of sunlight penetration). We plan to relate these findings to other work on the distribution of dissolved gases in the sea.

Mizar left the Sepik River for one day to visit Manam Island, which has an active volcano located about 30 miles southeast of the river's mouth. Enroute to Manam, Mizar established the correct position of neighboring Aris Island, which has been incorrectly located on nautical charts. The true position has been forwarded to the Naval Oceanographic Office by Captain MacCaulley.

Manam Island was interesting in that sediments around a volcano ought to be different from those collected elsewhere. One might also expect differences in the quality of the water and atmosphere in the vicinity of a volcano discharging smoke and fumes.

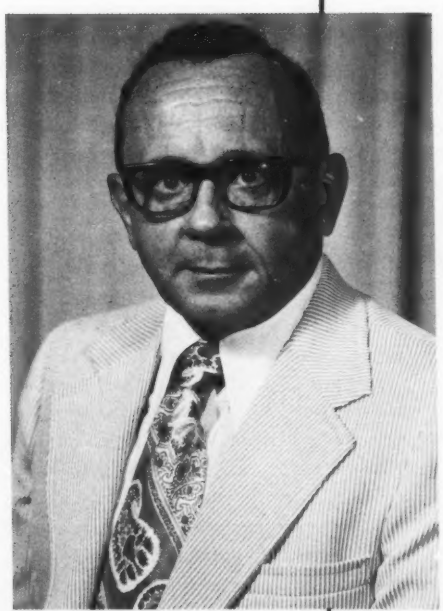
Manam's submarine slopes were very steep, and obtaining a sediment sample was difficult because of this and the currents. Thanks to excellent ship handling a sample was obtained, however. Much to our surprise, Manam was not only inhabited but also the site of a large school. Several canoes came alongside Mizar during the time we were bottom sampling.

Following the visit to Manam Island, Mizar returned to Madang where several scientists disembarked. Others remained aboard to continue their studies during the next leg of the cruise, an investigation of the chemical oceanography of the waters between New Guinea and Samoa. They were thus able to broaden the scope of their work considerably beyond the New Guinea area. Even before Mizar reached New Guinea some of the scientists commenced their studies during the preceding leg, a run from Japan to New Guinea by way of Guam.

Mizar reached Samoa in early June and the remaining biologists disembarked. The ship tied up in Oakland in early July and the sampling equipment and collections were returned to Naval Research Laboratory. Examination of this material will take some time, especially when samples must be sent to specialists for study. Ultimately a number of technical reports will be published on the cruise findings.

Future plans call for another study in the Caribbean-South American region in 1976. The ship for that operation will be USNS Hayes and the study area will be some large South American river and its estuary, with special investigations of bioluminescence in luminous bays in Jamaica and Puerto Rico.

A large group of scientists will participate in the 1976 cruise and it is hoped that their findings will be even more rewarding than those obtained this year.



Dr. Donald W. Strasburg is a 1945 graduate of the U.S. Naval Academy, and received a doctorate in marine biology from the University of Hawaii in 1953.

He has served as an officer in the U.S. Navy, taught at Duke University, and has worked in research with the National Marine Fisheries Service in Honolulu and Mississippi, and at Electric Boat Division, General Dynamics Corp.

Dr. Strasburg joined the Naval Research Laboratory in 1972 as head of the branch of marine biology and biochemistry. He participated in Mizar's cruise to Papua, New Guinea as senior scientist.

Reservists board USNS Victoria at Brooklyn Navy Yard.

An Unlikely Gathering

By PH1 John Francavillo

A Columbus, Ohio financial analyst; a Tennessee metallurgist; a New York City policeman, and an unemployed resident of the New York Yoga Ranch Colony—an unlikely though recent gathering at Military Sealift Command, Atlantic headquarters in Brooklyn. But they and 11 other members of their group had one thing in common. All were members of the U.S. Naval Reserve, gathered for their annual two weeks active duty for training.

Lieutenant Joseph M. Funchess, Lt. Cmdr. Herbert D. Guberman, Seaman Peter G. Ahern and Personnelman 3rd Class Daniel W. Chaneske are the analyst, metallurgist, policeman and yoga devotee. Varied as their interests are, they serve a common cause as Navy reservists.

"The mission of the Naval Reserve," said MSC, Atlantic Petty Officer 1st Class Dennis Lynn, "is to ensure that qualified units and individuals are available for active duty in time of war or national emergency." The Naval Reserve, Military Sealift Command units and the Naval Control of Shipping Organization (NCSORG) provide training for both officers and enlisted men.

MSC and NCSORG reserve units conduct regular training programs to keep their members ready for mobilization, offering both inactive and active duty training. The Atlantic command's reserve training coordinator is Warrant Officer Rudolfo L. Garcellano.

Unit training includes weekly or monthly drill periods at reserve centers across the country. Correspondence courses augment the drills. Normally reservists spend two weeks per year on duty for training.

During this two-week training period, the staff of the MSC, Atlantic headquarters plays an important part by familiarizing reservists with the command mission, organization, and basic business procedures. Other MSC commands offer specialized courses in marine terminal management, MSC office operations, use of radar, ocean transportation and antisubmarine operations.

Atlantic's orientation course combines classroom lectures and tours of MSC-owned and commercially chartered ships and maritime organizations. "We try to give each student a better perspective of MSC operations," said Capt. Robert D. Sante, then MSC, Atlantic chief-of-staff.

A typical first week schedule includes a command briefing, followed by coverage of the MSC fleet, military and civilian personnel, supply, medical services, counsel, financial management, safety, communications, and ship inspection programs. Highlights of the course are tours to the National Maritime Union offices, to an MSC ship, and a commercial container ship.

"I found the oceanographic ships to be interesting," recalls Seaman Lynn Brown. "I'm not used to seeing Navy ships painted white." To Seaman Thomas Santisi, the National

Maritime Union also offered something different. "The hiring hall reminded me of the Stock Exchange with that big board listing ship locations and openings available to seamen."

The second week of training covers MSC office operations and cargo booking operations, ship loading and utilization, terminal operations, special projects functions, fleet support, and engineering. "It's not all numbers and figures," said Petty Officer 3rd class Henry Schulz. "A number of instructors are experienced seamen with years at sea. Their personal stories humanize the program."

The second week also includes tours of a LASH (lighter-aboard-ship) and a roll-on, roll-off ship, cargo terminals, and New York City's towering World Trade Center.

MSC instructors consider the last day of class one of the most important. Critiques of instructors and the training program are filled out by each student.

"That is the link that ties each reserve group to the next," said CWO3 Garcellano. "We want each student to tell us how we can improve the course for the next class."

From students, MSC, Atlantic, officials have learned that too many slides in a presentation can be just as harmful as too few. Also, punctuality is greatly appreciated, and students think consideration should be given non-smokers in a crowded classroom.

Commander Guberman suggested more problem-solving sessions "whereby the group could go through the motions of handling day-to-day operations in 'war game' situations."

Most comments are favorable. Lieutenant Funchess said the Atlantic training is an "excellent means of exposing one to what MSC is all about." Commander Guberman added "It rates very highly. It is especially significant to those of us with no prior experience in MSC."

In his critique, Seaman Ahern said "the tours were very interesting and helpful especially since I personally had very little knowledge of shipping. The tours really reinforced what we learned in the classroom."

PN3 Chaneske felt MSC training personnel "were great, and very helpful." He noted that "being an 'airdale' (Naval aviation) I found the lectures informative, covering topics completely new to me."

Seaman Peter Sclafani examines a shipboard compass aboard USNS Victoria.

Martin Hajara reviews deck operation for MSC reservists.

Bridging the Gap

It was hardly unusual when planners from Military Sealift Command and Sun Shipbuilding and Dry Dock Co. met in June 1974 to discuss techniques for harnessing capabilities of roll-on, roll-off ships in emergency operations. Both MSC and Sun Shipbuilding have pioneered roll-on, roll-off ship operations. The Navy's sealift command led early U.S. development of the roll-on, roll-off ship concept with construction and operation of the USNS Comet and USNS Sea Lift, and acquisition of the GTS Admiral William M. Callaghan via a build and charter arrangement with private investors.

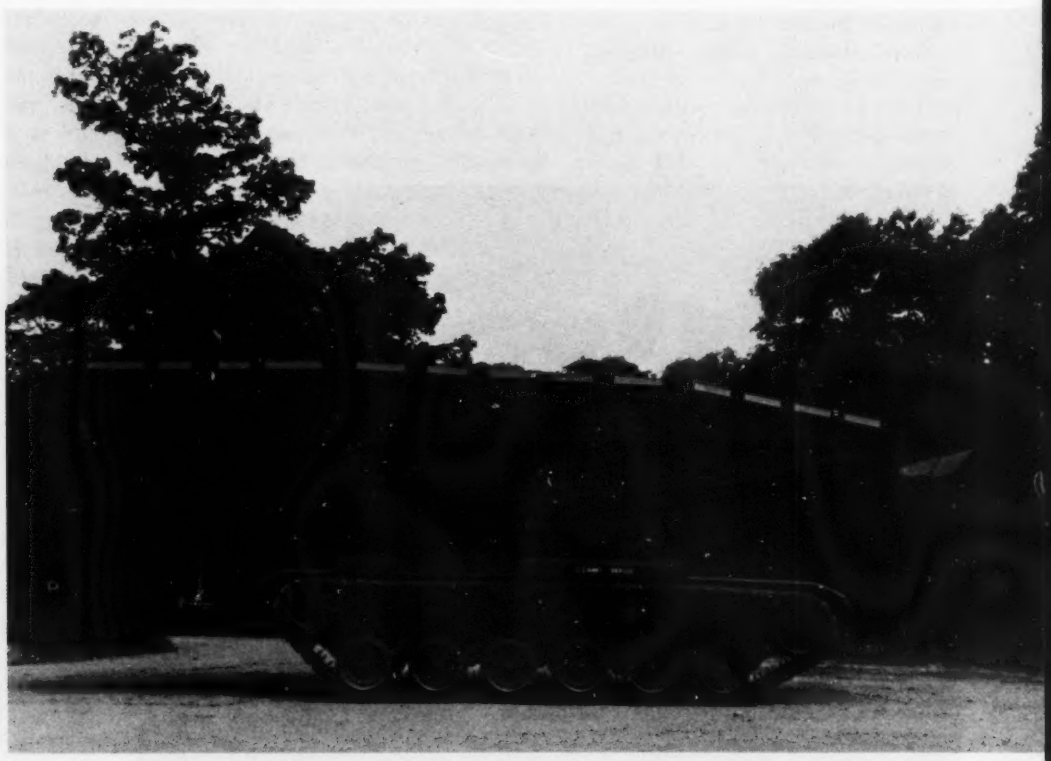
Sun Shipbuilding built the Comet in 1958. That ship, Sea Lift and Callaghan all have stern ramps and all carry military vehicles. Sun also has built eight commercial roll-on, roll-off (Ro-Ro) ships, latest being Great Land. The 790-foot, 16,875-ton Great Land has a 24-knot speed —sometimes hitting 30 knots with the aid of the swift currents generated by Cook Inlet on its regular runs between the U.S. West Coast and Alaska. It makes the trip in four days and delivers cargo needed in construction of the Alaskan pipeline.

However, Great Land like all eight Sun built roll-on, roll-off ships load by means of shoreside ramps through side ports. The ships must either carry a ramp, which would cut down available cargo space, or depend upon availability of ramps at ports they serve if they are to be turned around quickly, and thus take maximum advantage of their configuration.

In an emergency, when commercial roll-on, roll-off vessels would be critically important in meeting contingency sealift requirements, it is doubtful that ramps would be available to support the 12 ocean-going Ro-Ros and one coastal ship now in the U.S. flag merchant marine industry. Sabotage or bombing could close commercial ports and DeLong piers or other temporary facilities might be relied upon to support merchant ships.

With that fact in mind, Sun and MSC engineers and planners have devised and tested a means of using Army assault bridges. The bridges, already in the Army inventory, are used in conjunction with the M-60 tank, a tracked vehicle which can and would be delivered by a roll-on, roll-off ship in an emergency. The 60-foot bridge, used by armored units to cross deep ditches or small bodies of water, is carried in the field atop an M-60 tank.

Hinged on one end, the bridge is folded in half atop the tank when not in use and extended when needed. As



Scissoring assault bridge, attached to an M-60 tank, unfolds from the right.

the bridge extends, the tank counterbalances the weight of the extended bridge. When it is fully extended, and positioned on hydraulic jacks, the tank drives out from under the bridge and it's ready for use by assault troops.

Since the Army bridge can be lifted into forward support areas by aircraft or by ship, it has apparent value for support of Ro-Ros in an emergency. However, solutions do not come that easily. There is always a catch, in this case adapting a fixed bridge to the rise and fall of a ship. That this catch can be king size is illustrated by experience with Grand Island at Anchorage, Alaska. Ramps there must cope with a tidal change of as much as 34 feet in one six-hour period.

Obviously, built-in hydraulic jacks would not provide the type of support needed in that type situation. So, Sun Shipbuilding engineers borrowed an assault bridge from Army Materiel Command and went to work.

Result was the design and construction of adaptors attached to the Army bridge that allow for lateral motions that an 11-foot surge would cause, and vertical movements caused by a 20-foot tide.

At the ship end, a triangular wedge was attached to the end of the bridge. Attached to the wedge was a beam with steel loops, one on each end of the beam. The bridge was held to the ship by a fixed pendant attached to the loops. Hinged metal flaps were attached to the beam to allow vehicles to be driven between ship and bridge without unnecessary bumps.

Sun engineers designed another roller-equipped wedge for the dock end of the ramp which will compensate for lateral movement by a ship.

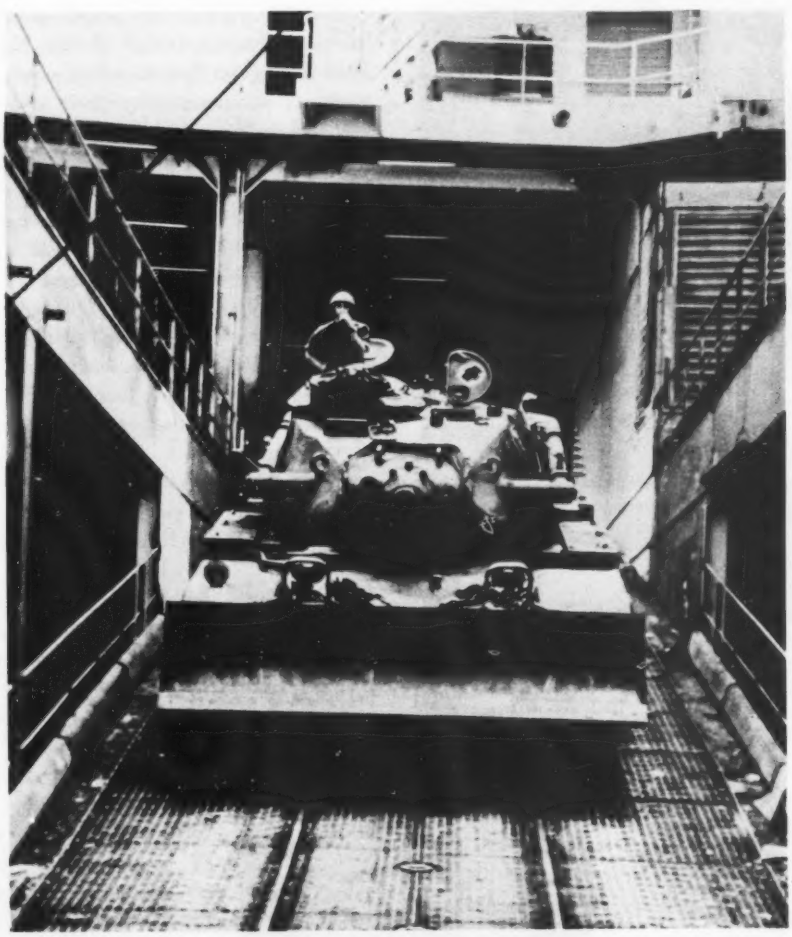
In May 1975 Sun engineers tested the prototype in its shipyard at Chester, Pa. by simulating vessel motion with a floating drydock. The design worked well in this test.

MSC helped set up a demonstration the following August. From the Army Materiel Command, MSC borrowed an M-60 tank and scissoring assault bridge. Also, MSC personnel arranged for technical assistance from the Army's Mobile Equipment Research and Development Center at Ft. Belvoir, Va. From the Pennsylvania National Guard MSC acquired a tank crew. Sun provided the SS Great Land and its Chester shipyard.

According to observers, the overall test was successful. With the Army assault bridge attached to the ship, the M-60 tank crew drove the vehicle up and down the ramp several times. They reported no problems in using the ramp, and said the Army assault bridge could be used in loading of wheeled and tracked vehicles aboard roll-on, roll-off ships.

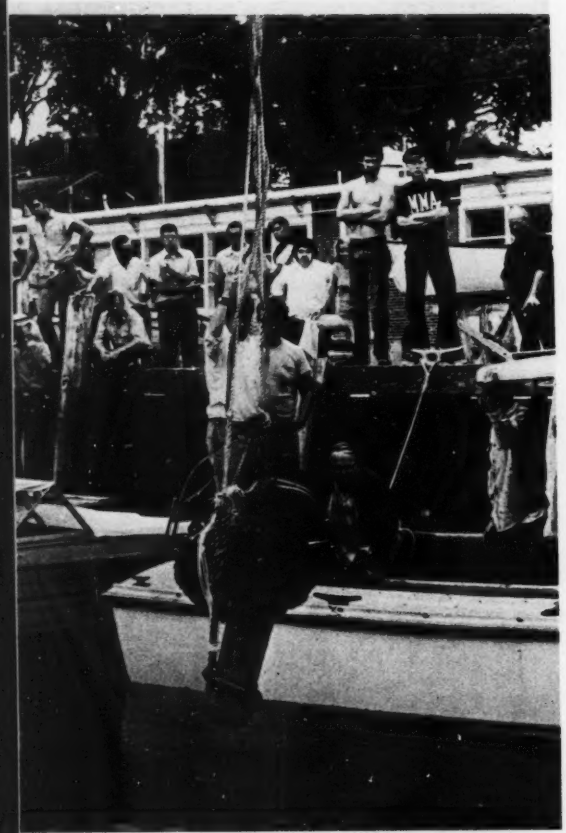
Chalk up one more success for industry and Defense planners seeking to uncover ways to better use existing ships in emergency situations. ⚓

An Army tank moves down the test bridge from the side port of SS Great Land.



Relic Of A Disaster

By David B. Wyman



Recovery of a 1,000-pound cannon helped identify the wreck as the Revolutionary War privateer Defence.

Maine Maritime Academy photo

In the summer of 1779 the state of Massachusetts formed an expeditionary force of 40 ships to capture Fort George at Castine, Maine, in what was then the eastern part of Massachusetts. Three Continental Navy vessels, three vessels of the Massachusetts State Navy, one from New Hampshire, 12 privateers and 21 transports laid siege to Castine on July 24. Sporadic attacks also were made on Fort George, but without success.

On August 14 a British force of six ships arrived at Castine and the American fleet immediately took flight up the Penobscot River. Most of the ships were subsequently burned or blown up by their crews to prevent capture by the British.

This was a major disaster for the revolutionaries, but now provides a source of invaluable artifacts from the Revolutionary War.

Over the years many people have been interested in ships of this ill-fated fleet. The British initially salvaged many cannon for their own use, and in the succeeding 196 years many more cannon and timbers have been salvaged from the wrecks.

Ebenezer Clifford used a diving bell about 1800 to recover quite a few cannon. In the 1950s, a contractor pulled up a number of cannon while constructing a bridge at Bangor, Maine. Others sporadically have made recoveries which helped maintain interest in the fleet at the bottom of the river.

In 1972 the Ocean Engineering Summer Laboratory, a joint project of the Ocean Engineering Department at the Massachusetts Institute of Technology and Maine Maritime Academy was looking for a project to help teach undergraduate students how to conduct underwater search and salvage projects.

Interest developed in the ships of the 1779 fleet. Through extensive research of records and talks with local fishermen two probable search areas were identified.

The search was conducted using sonar, both a vertical echo sounder (fathometer) and a side scan sonar. Three targets were found which upon investigation proved to be two cannon and a brick cook stove. A permit to explore the wreck site was granted under the Antiquities Statutes of the State of Maine and work began.

During the first summer, students from both the Massachusetts Institute of Technology and Maine Maritime Academy searched through the mud for pieces of the wreck. It quickly became apparent that they had located more than a few cannon and a cook stove. Various pieces of timber were found, and new discoveries were made with each dive.

A row of wooden frames was discovered with planking attached, and as more of the ship's wooden structure was found it appeared that the hull might still be intact. Buoys were placed on the various parts, and though not apparent to the divers working in the three to five-foot visibility (at times zero visibility), the surface buoys outlined a ship's hull.

This wreck was becoming a significant find for few sunken vessels are found with the wooden hull intact. Ship worms (teredos) very quickly devour the wooden portions of such wrecks. Luckily, the waters of Penobscot Bay are cold enough so that the worms are not active there. This, coupled with the fact that the hull was buried in mud, caused her to be well preserved.

Once a decision was made to bring up the first cannon, a lifting rig was designed and built to work off the stern of a 50-foot launch.

The heaving up was a slow process, but eventually a large encrusted object was at the water's edge and visible for the first time.

At the dock a crane lifted the prize onto the pier and the crust was carefully removed to expose a six-pound cannon. A six-pound cannon weighs 1,000 pounds but fires a ball weighing six pounds.

With the recovery of the cannon the wreck was identified as the Revolutionary War privateer Defence. De-

fence was about 170 tons (about 75 feet overall length), with 16 six-pound cannon and had a crew of 100 men under the command of John Edmonds. Defence was built as a privateer in 1779 in Beverly, Mass. and destroyed when she was less than a year old.

The first summer also yielded a variety of smaller artifacts including a lead scupper about 3 inches in diameter and 12 inches long, wood barrel staves and cannon balls. All of the iron objects had been affected by their 200 years of salt water immersion with the most dramatic being the cannon balls.

Some balls came up in fairly good condition while others looked reasonably good but had lost most of their weight. Instead of weighing their original six pounds, they weighed less than a half pound, most of the iron being gone with only a matrix of carbon and other impurities left.

The Maine State Museum, the Smithsonian Institution and others became interested in the vessel as a source of historical data and artifacts, so for the next two summers the Ocean Engineering Summer Laboratory proceeded slowly on the investigation of the wreck site. The second summer was devoted to recovery of additional artifacts.

During the summer a second six-pound cannon was raised for display at the Navy Memorial Museum in Washington, D.C. The cannon is still undergoing preservation but a new carriage has been built and the recovered cannon should be on display shortly.

Artifacts such as a 12-inch diameter grindstone, a wooden wash bucket, a stand of grape shot, two 12-inch oval copper pot lids, wooden pulley blocks and bricks from the cook stove also were recovered.

The most demanding task was preservation of artifacts. Procedures developed by the Smithsonian Institution for preservation of both iron and wooden objects were used.

In 1974, detailed mapping of the wreck site was completed. The mapping proved to be challenging because of the limited visibility (0-5 feet). No one really knew what the overall site looked like.

It was decided that some kind of identification or grid system was needed so that students doing the mapping could find the proper locations to take the necessary measurements. Yellow polypropylene line was stretched down the center line of the hull marked by the stem and the two mast stubs which had been identified.

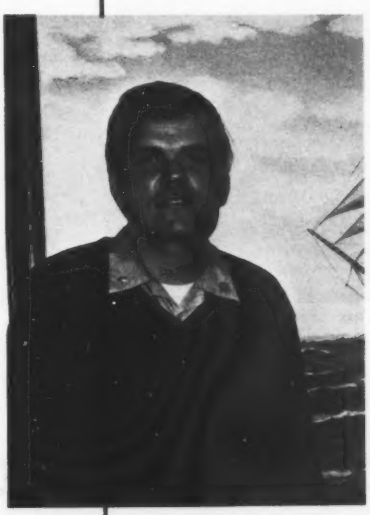
Lines were then stretched across the hull at approximately 10-foot intervals. After the grid system was completed, measurements along each leg of the grid were taken and a scale drawing of the site was prepared. Later a Maine State Museum artist prepared a descriptive sketch of the wreck site based on the measurements.

The wreck of the Defence was now identified beyond doubt. Over the winter of 1974-75 the Maine State Museum and the American Institute of Nautical Archaeology joined in the operation with the American Institute of Nautical Archaeology taking over leadership.

This new consortium has just completed a detailed investigation of the Defence and plans have been made to expand the work next summer. The group also has done preliminary searching for other vessels of the ill-fated fleet of 1779. By 1979, 200 years after the scuttling of the fleet, work on the Defence and other vessels of the fleet should produce a significant contribution to knowledge of ships of the Revolutionary War period.

The artifacts already recovered are in the custody of the Maine State Museum where most are presently undergoing preservation. A representative selection of artifacts also is on display at the Wilson Museum in Castine. In the near future, one of the cannon will be displayed at the Navy Memorial Museum at the Washington Navy Yard in Washington, D.C.

David B. Wyman received his Bachelor of Science degree from the United States Merchant Marine Academy and a Master of Science degree in Ocean Engineering from the University of Massachusetts. Since 1970 he has taught at Maine Maritime Academy, where he is presently an associate professor of Ocean Engineering. Professor Wyman directs his academy's portion of the Massachusetts Institute of Technology/Maine Maritime Academy ocean engineering summer laboratory. He also has sailed as a licensed maritime officer for Military Sealift Command.



Essex Woman To Break Maritime Tradition

By Louis R. Granger

Cadet Deborah Doane examines Castine waterfront from the State of Maine.

A 25-year-old Connecticut woman who has been a small boat sailor since she was knee-high to a tiller will likely become the first female licensed merchant mariner in the traditionally male dominated U.S. Merchant Marine.

A senior at Maine Maritime Academy, Deborah Doane, of Essex, on the Connecticut River, will take her third mate examination next April and as soon as possible after that "I want to ship out," she said.

Miss Doane who said she has been sailing "all my life" may not have been the first woman to enter a maritime school, but because she already had a degree she was permitted to take a 2½-year course. She earned a Bachelor of Arts degree in chemistry at the University of Vermont before entering the Maine academy in January 1974.

Having already sharpened her study habits, with years of small boat handling experience and the determination of a Madame Curie, Miss Doane has found it easier than many of her classmates except for a bit of male chauvinism and a little jealousy because she is No. 1 scholastically, and because of her no-nonsense attitude toward her work.

She has two long-range goals. First, of course, is to become a ship master, and the other is to eventually buy a large schooner and take teenagers to sea for training. "It's incredible training and discipline for life," she said.

Women in the merchant marine? "I don't see any problem," said Miss Doane. "Women have been sailing on Scandinavian ships for years. There are women officers on Russian ships. But this summer will tell, when I cadet ship. It's a matter of proving myself."

Maine Maritime Academy has a program in which cadets work on commercial U.S. flag ships at the end of their second year. Miss Doane missed that last year because it was her first summer at the academy and she was required to make the annual summer training cruise on the State of Maine, formerly USNS Upshur, and then took some summer courses. Although she again was aboard for

Practicing her navigational skills, Deborah Doane plots a course.

this year's cruise, Miss Doane plans to cadet ship at the end of the summer.

Life at the academy for Miss Doane has presented some special problems. "The boys gave us a hard time, but we gave it right back. They razzed us about hair cuts. They tried to put me on UA (unauthorized activity) because of my earrings."

The "us" refers to another female cadet, Susan Warren, who is finishing her first year.

"Susie is accepted. She's the same age as her classmates. I'm older," said Miss Doane. "And all this attention doesn't help. The press played me up last year and that didn't help. Right now I'm No. 1 scholastically and that's a problem. But I love it. I love the coast and Castine. The boys find it hard here because there's nothing to do. In my spare time I work in the library 20 hours a week. I sail in the fall sailing program and ski in the winter."

The first couple of weeks at Maine Maritime, she said, "were interesting. I got prank phone calls and things like that, but it quieted down. There are still a few hard-core chauvinists who stick to their guns. But I've been well received and I think I'm accepted now."

Attending Maine Maritime Academy might have been inevitable. A friend of the family who was graduated from Maine Maritime initially influenced Miss Doane. Her father, Robert, Essex pharmacist and World War II Coast Guard officer, suggested she apply.

Her application was the first one from a female and after applying she went sailing. Miss Doane was studying for a Coast Guard license with the intention of working for a company that delivered yachts to Florida and the Caribbean in the spring, and brought them back in the fall.

Since graduation in 1971 she has been sailing commercially. In the fall of 1972 she skippered a 45-foot Aldon ketch from Connecticut to Ft. Lauderdale. Four of her classmates were aboard, all without any sailing experience.

"We left in a snowstorm in November. It was a bad trip," she said. "One crew member left at Cape May, N.J. We had quite a storm in Delaware Bay and he got his fingers frostbitten. The weather was scaring him—me too, but I didn't tell him that. We finally delivered the boat to Fort Lauderdale."

From Florida she sailed in another yacht to the Virgin Islands and raced in the Antigua sailing week regatta in a forty-foot yawl. "We got the prize for the most hull damage. A catamaran ran into us."

From there she sailed to Bermuda and back home. That fall she again skippered a 32-foot sloop from Vermont bound for Haiti. She was the only one aboard with ocean-going experience. They arrived in Annapolis and that's when it happened. She was notified that the commandant of midshipmen, Capt. William F. Brennan, wanted an interview before the trustees met.

"After the interview I returned to Annapolis to wait the decision and got word that I had been accepted."

Miss Doane readily admits that her life is often lonely at school, but noted, "It's a lonely life out there too. I love being on the water, I want to do it professionally. I want to travel, I want to do it by sea, and I want the instruction backing me up. This is the best way."

If things work out the way she hopes, Miss Doane will ship out next spring on a breakbulk vessel. "I'm attracted to breakbulk ships, but they're dying. So I don't know."

As far as Miss Doane's future is concerned, "Father is ecstatic about it. He can't quit smiling. Mother likes it pretty much but she is worried about the loneliness. My brothers and sisters (two each) love it. And I can't wait."

Former USNS Tallulah master Capt. Harlan Jackson displays the 1975 American Institute of Merchant Shipping (AIMS) Distinguished Sea Rescue Award presented to him for his part in the rescue of 257 crewmen and entertainers of the burning cruise ship Cunard Ambassador Sept. 12, 1974. Left to right are British Embassy Shipping Attache Charles Cruickshank; AIMS President James J. Reynolds; Captain Jackson; Military Sealift Command Commander Rear Adm. Sam H. Moore; Special Asst. of Legislative Affairs for Masters, Mates and Pilots union Capt. Leon Goltzer; Hudson Waterways Corp. representative Capt. Arthur Parris, and director of the Bureau of Traveling Inspectors, U.S. Coast Guard, Capt. Richard Simmonds. Admiral Moore accepted a plaque on behalf of the ship and crew. Hudson operated Tallulah for MSC before the ship was laid up. Captain Jackson is a member of MM&P.

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